

— August 20, 2002 —



Financial Management

Measurement of Water Usage by
DoD Components Serviced by the
District of Columbia Water and
Sewer Authority
(D-2002-140)

— Department of Defense —
Office of the Inspector General

Quality

Integrity

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Report Documentation Page		
Report Date 20 Aug 2002	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle Financial Management: Measurement of Water Usage by DoD Components Serviced by the District of Columbia Water and Sewer Authority		Contract Number
		Grant Number
		Program Element Number
Author(s)		Project Number
		Task Number
		Work Unit Number
Performing Organization Name(s) and Address(es) OAIG-AUD(ATTN: AFTS Audit Suggestions) Inspector General Department of Defense 400 Army Navy Drive Arlington, VA 22202-2884		Performing Organization Report Number D-2002-140
Sponsoring/Monitoring Agency Name(s) and Address(es)		Sponsor/Monitor's Acronym(s)
		Sponsor/Monitor's Report Number(s)
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes		
Abstract		
Subject Terms		
Report Classification unclassified		Classification of this page unclassified
Classification of Abstract unclassified		Limitation of Abstract UU
Number of Pages 33		

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Acronyms

FOWM	Federally Owned Water Main
IG DoD	Inspector General of the Department of Defense
WASA	Water and Sewer Authority



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704

August 20, 2002

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (COMPTROLLER)
ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
NAVAL INSPECTOR GENERAL
AUDITOR GENERAL, DEPARTMENT OF THE ARMY
DIRECTOR, NATIONAL IMAGERY AND MAPPING
AGENCY
DIRECTOR, WASHINGTON HEADQUARTERS
SERVICES

SUBJECT: Report on Measurement of Water Usage by DoD Components Serviced by
the District of Columbia Water and Sewer Authority
(Report No. D-2002-140)

We are providing this report for review and comment. We conducted this audit in support of our quarterly audits of the promptness of DoD payments to the Department of the Treasury for District of Columbia water and sewer services. We considered management comments on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. We request that the National Imagery and Mapping Agency and Arlington National Cemetery provide completion dates for corrective actions. The Army and Air Force did not respond to the draft report. We request that the Army and Air Force provide comments in response to the final report. Management is requested to provide all comments by September 20, 2002.

If possible, please provide management comments in electronic format (Adobe Acrobat file only). Send electronic transmission to the e-mail addresses cited in the last paragraph of this memorandum. Copies of the management comments must contain the actual signature of the authorizing official. We cannot accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, they must be sent over the classified SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Henry F. Kleinknecht at (703) 604-9324 (DSN 664-9324) (hkleinknecht@dodig.osd.mil) or Mr. Ronald W. Hodges at (703) 604-9592 (DSN 664-9592) (rhodges@dodig.osd.mil). See Appendix E for the report distribution. The team members are listed inside the back cover.

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General of the Department of Defense

Report No. D-2002-140

(Project No. D2001FA-0154.001)

August 20, 2002

Measurement of Water Usage by DoD Components Serviced by the District of Columbia Water and Sewer Authority

Executive Summary

Who Should Read This Report and Why? This report should be read by DoD managers who have a direct interest in, or are in need of information about the accuracy of the measurement of water usage by DoD Components serviced by the District of Columbia Water and Sewer Authority.

Background. The District of Columbia Water and Sewer Authority supplies water and wastewater treatment (sewer) services to 16 separate DoD installations, sites, and other organizations in the National Capital Region. Public Law 106-554, the Consolidated Appropriations Act of 2001, requires the inspector general of each Federal agency to audit the agency's promptness in paying the District of Columbia for water and sewer services. The District of Columbia Water and Sewer Authority provides meter readings and annual estimated billings to the Department of the Treasury for water and sewer services provided to the DoD Components and other Federal agencies. We evaluated the accuracy of water meter readings that supported the billings for water and sewer services and assessed the adequacy of the related management controls.

Results. DoD Components could not determine the accuracy of water meter readings for services provided by the District of Columbia Water and Sewer Authority. There was a need for procedures to inspect, maintain, repair, and replace water meters. At least 27 of 60 water meters were not working properly. As a result, from FY 1990 through May 2001, DoD Components connected to the Federally Owned Water Main were overcharged about \$1.8 million, and the National Park Service was overcharged about \$0.5 million. Furthermore, DoD Components had no assurance as to the accuracy of water and sewer bills that fluctuated from \$29.9 million in FY 2000 to \$2.1 million in FY 2002. See Finding section for details on audit results and recommendations.

Management Comments and Audit Response. The Assistant Secretary of the Navy (Installations and Environment), the Director of Washington Headquarters Services (Real Estate and Facilities), the Director of the National Imagery and Mapping Agency, and the Superintendent of Arlington National Cemetery concurred with the recommendations and have initiated corrective actions. However, the Director of the

National Imagery and Mapping Agency and the Superintendent of Arlington National Cemetery did not provide completion dates for corrective actions. The Army and the Air Force did not respond to the draft report. We request that the Army, Air Force, Director of the National Imagery and Mapping Agency and the Superintendent of Arlington National Cemetery provide comments on the final report by September 20, 2002. See the Finding section of the report for a discussion of management comments and audit responses and the Management Comments section of the report for the complete text of the comments.

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Background

Public Law 106-554, the Consolidated Appropriations Act of 2001, requires the inspector general of each Federal agency to audit the agency's promptness in paying the District of Columbia for water and sewer services. The District of Columbia Water and Sewer Authority (WASA) provides meter readings and annual estimated billings to the Department of the Treasury for water and sewer services provided to DoD Components and other Federal agencies. The audit examines the adequacy of management controls to ensure amounts billed by WASA are proper.

The District of Columbia Water and Sewer Authority. The District of Columbia provides both water supply and wastewater treatment (sewer) services to Federal agencies and DoD Components within the National Capital Region. Under the District of Columbia Public Works Act of 1954, the Federal Government is to receive water and sewer services from the District of Columbia, and the District of Columbia is to be paid with an annual lump sum in the District of Columbia Appropriations Act. In October 1996, the District of Columbia City Council transferred water and sewer responsibilities from the Department of Public Works to WASA. WASA provides meter readings and annual estimated billings to the Department of the Treasury for water and sewer services provided to the Federal agencies and DoD Components. See Appendix B for a list of DoD customers receiving WASA services.

Department of the Treasury. The Department of the Treasury has the responsibility for paying WASA for water and sewer services it provides to Federal agencies, such as DoD Components. Based on meter readings and estimated bills the Department of the Treasury receives from WASA, the Department of the Treasury provides invoices with estimated quarterly payment amounts to the Federal agencies and DoD Components for their estimated water and sewer usage. The DoD Components, composed of 16 separate installations, sites, and organizations, are required to make quarterly payments to the Department of the Treasury for those billings.

Water and Sewer Payment Legislation

1990 Legislation. Public Law 101-168, the District of Columbia Appropriations Act of 1990, changed the payment method for Federal agencies' water and sewer consumption within the District of Columbia. Public Law 101-168 shifted responsibility for payment of water and sewer bills to the respective Federal agencies. Under Public Law 101-168, the Department of the Treasury serves as a collection agent, receiving payments from individual agencies for their share of the estimated water and sewer usage, and remitting a single payment to the District of Columbia. Funds for water and sewer services come through the agencies' own operating budgets and their respective appropriations. WASA is required to submit a budget to the Office of Management and Budget that includes an estimate of the cost of services for the

Federal agencies. WASA submits the bills to the Department of the Treasury for the Federal agencies and DoD Components within the National Capital Region. The Federal agencies and DoD Components are required to make quarterly payments to the U.S. Treasury account entitled “Federal Payment for Water and Sewer Services” on the first day of each quarter. The Department of the Treasury is to pay WASA from this account on the second day of each quarter. If there are insufficient funds in the account, the Secretary of the Treasury is to make payments from available funds, which will be reimbursed by the user agencies.

2001 Legislation. Public Law 106-554 amended the process used by the Federal agencies to make payments to the Department of the Treasury. The Department of the Treasury is now authorized and directed to draw down funds from Federal agencies and provide those funds to WASA by the second day of each quarter when agencies do not forward timely payments of amounts billed by WASA. Public Law 106-554 applied to current billed amounts and retroactively to past due amounts dating back to FY 1990.

2002 Legislation. Public Law 107-96, the District of Columbia Appropriations Act of 2002, enacted on December 21, 2001, provides additional guidance on WASA and the Federal agencies’ responsibilities for installing, maintaining, and testing water meters, as well as the responsibility for allocating the billed amount for services among multiple users sharing one meter. The District of Columbia Public Works Act of 1954 had provided:

That as a condition of service, at each point of the Federal Connection to the water system of the District for service outside the District there shall be installed and maintained at the expense of the department, independent establishment, or agency of the United States which is to use water there from a suitable meter or meters.... .

Public Law 107-96 provides:

As an additional condition of service, the department, agency, or establishment which is responsible for the maintenance of any such meter shall provide the Mayor (acting through the District of Columbia Water and Sewer Authority) with such access to the meters as the Mayor may require to measure actual usage of the department, agency, or establishment (including any entity under the jurisdiction of the department, agency, or establishment) for purposes of making the adjustments to annual estimates... .

Public Law 109-76 further provides:

If a department, independent establishment, or agency of the United States which uses water and water services from the District of Columbia water supply system has not installed a suitable meter at each point of the Federal connection to the system to control and record the use of water through each such connection (as required

under section 106 (a) of the District of Columbia Public Works Act of 1954) as of the expiration of the 60-day period which begins on the date of the enactment of this Act:

- (A) the District of Columbia Water and Sewer Authority shall install such a meter or meters (and incidental vaults, valves, piping and recording devices, and such other equipment as the Authority deems necessary) not later than 60 days after the expiration of the period; and
- (B) the department, independent establishment, or agency shall pay the Authority promptly (but in no case later than 30 days after the Authority submits a bill) for the costs incurred in installing the meter and equipment.

Public Law 107-96 also makes each Federal department, independent establishment, or agency responsible for allocating and collecting billed amounts for District of Columbia water and sewer services from entities under the jurisdiction of the Federal department, independent establishment, or agency.

Objective

The audit objective was to evaluate the accuracy of DoD Components' water meter readings for the services provided by the District of Columbia Water and Sewer Authority and assess the adequacy of the related management controls. See Appendix A for a discussion of the audit scope and methodology and prior coverage related to the audit objectives.

Accuracy of DoD-Owned Water Meters

DoD Components could not determine the accuracy of water meter readings for services provided by the District of Columbia Water and Sewer Authority. This condition occurred because DoD Components had not identified WASA and DoD Component responsibilities for and locations of DoD-owned water meters. Also, DoD Components had not established controls and procedures to:

- verify that WASA routinely inspected, reported inspection results, and read 60 DoD-owned water meters;
- repair or replace inoperable water meters; and
- accurately measure water usage from the Federally Owned Water Main.

As a result, from FY 1990 through May 2001, DoD Components connected to the Federally Owned Water Main were overcharged about \$1.8 million, and the National Park Service was overcharged about \$0.5 million. Furthermore, DoD Components had no assurance as to the accuracy of water and sewer bills ranging from \$29.9 million in FY 2000 to \$2.1 million in FY 2002.

Responsibility and Locations of DoD-Owned Water Meters

DoD Components did not adequately identify WASA and DoD Components' responsibilities for DoD-owned water meters. DoD Components were not aware of WASA practice to inspect water meters and that the Components were responsible for the maintenance and repair of DoD-owned meters. Public Law 101-168 assigns WASA the responsibility to bill the Department of the Treasury for water and sewer services, the Department of the Treasury the responsibility to bill and collect from Federal agencies, and the Federal agencies the responsibility for payment. Public Law 101-168 does not establish procedures or processes to dispute water and sewer bills or to resolve disputes between DoD Components, WASA, and the Department of the Treasury. DoD Components were mandated to pay water and sewer bills without a process to dispute improper billing; however, the Components did not maintain or repair water meters and did not verify the accuracy of meter readings.

DoD Component and WASA records show discrepancies concerning the number of meters and meter locations. For example, WASA records showed that Walter Reed Army Medical Center was billed for 10 water meters while Walter Reed Army Medical Center records showed 9. Also, DoD Components were not certain which meters WASA should service. WASA inspected four meters at Fort McNair. Fort McNair contends that only three water meters are

serviced by WASA, one of which was not in WASA records. DoD Components need to locate all meters that measure water service from WASA and establish and implement procedures to test the meters.

Inspection and Meter Readings

Inspection of Meters and Reporting Results. DoD Components did not verify that WASA routinely inspected water meters, were not notified when water meters were inspected, and were not made aware of the results of the meter inspections. WASA practice requires that DoD Components repair or replace meters within 30 days after receiving written notification from WASA of the meters' condition. However, neither WASA nor DoD Components have records of WASA providing notification to DoD Components or other Federal customers of inoperable meters. DoD Components need to establish and implement procedures to verify that WASA routinely inspects and reports results of inspections for DoD-owned water meters.

Meter Readings. DoD Components did not verify that WASA routinely read DoD-owned water meters. Although WASA practice was to perform monthly readings, WASA records show that meter readings were made 4 to 208 days apart. DoD Components also were not notified when WASA read the meters. The need for DoD Components to verify that meters are accurately read at the point of Federal connection is important because WASA provides meter readings and annual estimated billings based on those meter readings to the Department of the Treasury for water and sewer services provided to DoD Components. Based on the information the Department of the Treasury receives from WASA, the Department of the Treasury prepares invoices that show the estimated bill for the fiscal year, including adjustments based on actual usage from 3 years prior. DoD Components are then required to make quarterly payments to the Department of the Treasury for the amounts billed. Appendix C shows a flowchart of this complex billing and payment process. DoD Components need to develop and implement effective controls and procedures to verify that WASA accurately reads water meters to ensure that estimated water and sewer bills are reliable.

Repair or Replacement of Water Meters

DoD Components had not established procedures for repairing or replacing inoperable water meters. We reviewed WASA test reports for 27 of 60 DoD-owned water meters. For 27 meters tested between June 12, 2000, and June 28, 2001, 5 meters did not work and the remaining 22 meters did not accurately register water usage. We also found that DoD Components did not establish or implement preventative maintenance programs to facilitate efficient operation and to extend the useful life of the meters. As a result, at least 45 percent (27 of 60) of the DoD-owned meters need to be repaired or replaced.

Although the remaining 33 meters were not tested, those meters could also be inaccurately measuring water usage. Table 1 shows the details for the DoD Components meters tested.

	Total Meters	Meters Tested	Meters Not Working	Inaccurate Meters
Pentagon ¹	1	0	-	-
Arlington National Cemetery ¹	1	0	-	-
Walter Reed Army Medical Center	10	8	1	7
Fort McNair	4	4	1	3
Navy ²	37	12	3	9
Bolling Air Force Base	6	3	-	3
National Imagery and Mapping Agency	1	0	-	-
Total	60	27	5	22

¹ Represents one of two meters at the Federally Owned Water Main (FOWM).

² Navy has three meters that are not working. Of the three meters, two meters were tested by an independent contractor hired by the Navy.

In an effort to resolve the problem with the deficiency of the water meters, DoD Components have replaced or plan to replace nonworking meters. Therefore, we are making no recommendations to install or replace the water meters. However, DoD Components need to establish and implement a maintenance program to repair or replace meters.

Federally Owned Water Main

DoD Components had not installed individual meters (sub-meters) to accurately measure water supplied from the Federally Owned Water Main (FOWM). The FOWM has two shared meters located at the Francis Scott Key Bridge (Key Bridge). See Appendix D for an illustration of the FOWM. Washington Headquarters Services (the Pentagon), Fort Myer, Arlington National Cemetery, and two non-DoD agencies, Department of the Interior (National Park Service) and Ronald Reagan National Airport, were all users of the FOWM. National Airport had two sub-meters connected to FOWM to measure water flowing directly to the airport. WASA used the two shared meters at the Key Bridge to determine DoD Components' water usage and billed amounts. From FY 1990 to May 2001, WASA billed National Airport based on meter readings from the airport's two sub-meters connected to the FOWM but did not deduct the airport's water usage from the amounts billed to the three DoD Components and the National Park Service. As a result, WASA overbilled the three

DoD Components by \$1,828,103 and the National Park Service by \$548,841. In a letter to the Office of Management and Budget, dated April 15, 2002, the WASA Chief Financial Officer provided projected billing estimates for Federal customers for FY 2004. The billing estimates included the refund for prior duplicate billings totaling \$2.4 million.

In FY 1999, Fort Myer stopped receiving water and sewer services from WASA. During FY 2001, the Pentagon and Arlington National Cemetery installed individual meters on the FOWM to measure water usage. Public Law 107-96 assigns new responsibilities to DoD Components for payments of the WASA billings.

Nothing in this section may be construed to require the District of Columbia to seek payment for water services directly from any Federal entity which is under the jurisdiction of a department, independent establishment, or agency which is required to make a payment for such services under this section, or to allocate any amounts charged for such services among the entities which are under the jurisdiction of any such department, independent establishment, or agency. Each Federal department, independent establishment, and agency receiving water from the District of Columbia shall be responsible for allocating billings for such services among entities under the jurisdiction of the department, establishment, or agency, and shall be responsible for collecting amounts from such entities for any payments made to the District of Columbia under this section.

In the case of water services provided to a department, independent establishment, or agency in Virginia through the Federally owned water main system, if the total amounts billed for all individual users of the system (as measured by the meters for each individual user), is less than the total amount as measured by the meters at the delivery points into the system at the Francis Scott Key Bridge, the District government shall collect, and the Secretary of Defense shall pay, the difference to the District government in accordance with the requirements for collecting and making payments under this section.

The Director, Washington Headquarters Services should establish procedures to ensure that all parties with connections to the FOWM have meters that are properly read and tested for accuracy. In addition, the Director, Washington Headquarters Services should reconcile WASA meter readings and individual meters along the FOWM with the readings for the shared meters located at the Key Bridge.

Water and Sewer Bills

DoD Components could not determine the accuracy of water and sewer bills that varied significantly from year to year. For example, the Navy was billed \$13.7 million in FY 2000 for water and sewer usage but was billed only \$2.5 million in FY 2001. As a result, the Navy cannot reasonably estimate

water and sewer bills for future years. Table 2 shows significant variations in amounts billed to DoD Components for water and sewer services over a 3-year period.

Table 2. Amounts Billed to DoD Components for Water and Sewer Services in FY 2000 Through FY 2002 (in thousands)			
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
Pentagon ¹	\$ 2,443	\$ 1,180	\$ 1,371
Navy	13,689	2,523	(1,578) ²
Bolling Air Force Base	10,563	1,447	(685) ²
Other DoD Components ³	3,167	2,594	3,035
Total	\$ 29,862	\$ 7,744	\$ 2,143

¹Allocations based on Pentagon FOWM and Sewer Evaluation Report.
²Navy and Air Force Components have credits in FY 2002 for prior year overpayments.
³Includes Arlington National Cemetery, Walter Reed Army Medical Center, Fort Myer, Fort McNair, and National Imagery and Mapping Agency.

In conclusion, DoD Components had no assurance as to the accuracy of water and sewer bills ranging from \$29.9 million in FY 2000 to \$2.1 million in FY 2002.

Recommendations, Management Comments, and Audit Response

- 1. We recommend that the Commander, Walter Reed Army Medical Center; Commander, Fort Myer; Superintendent, Arlington National Cemetery; Director, Navy Staff (Field Support Activity); Commander, Bolling Air Force Base; Director, National Imagery and Mapping Agency; and Director, Washington Headquarters Services:**
 - a. Locate and test water meters that measure water service from the District of Columbia Water and Sewer Authority.**
 - b. Establish and implement procedures to verify that the District of Columbia Water and Sewer Authority routinely inspects and reports results of inspections for DoD-owned water meters.**

- c. Develop and implement effective controls and procedures to verify that the District of Columbia Water and Sewer Authority accurately reads water meters to ensure that estimated water and sewer bills are reliable.
- d. Establish and implement a maintenance program to repair or replace inoperable water meters.

Management Comments. The Assistant Secretary of the Navy (Installations and Environment) and the Director of Washington Headquarter Services (Real Estate and Facilities) concurred with the recommendations and stated that corrective actions will be completed by September 30, 2002. Washington Headquarters Services plans to replace the 16- and 18-inch water meters at the Key Bridge. The Director of the National Imagery and Mapping Agency and the Superintendent of Arlington National Cemetery concurred but did not provide dates for completion of corrective actions. The Army and the Air Force did not comment on the recommendations.

Audit Response. We request that Army and Air Force provide comments in response to the final report. We also request that the Director of the National Imagery and Mapping Agency and the Superintendent of Arlington National Cemetery provide dates that the planned actions will be completed.

2. We recommend that the Director, Washington Headquarters Services should establish procedures to:

- a. Determine that all meters connected to the Federally Owned Water Main are properly read and tested for accuracy.
- b. Reconcile the District of Columbia Water and Sewer Authority meter readings for the shared meters at the Francis Scott Key Bridge with the readings for individual meters along the Federally Owned Water Main.

Management Comments. The Director of Washington Headquarters Services (Real Estate and Facilities) concurred with the recommendations. Washington Headquarters Services stated that through combined efforts between Washington Headquarters Services and the District of Columbia Water and Sewer Authority, the accuracy of the meters will be validated and reading inconsistencies will be resolved. Corrective actions will be completed by September 30, 2002.

Appendix A. Scope and Methodology

We evaluated the accuracy of DoD Components' meter readings for water services provided by the District of Columbia Water and Sewer Authority (WASA). We interviewed WASA and DoD Component personnel to obtain an understanding of the management controls for water meters. We reviewed 36 WASA meter inspection and 27 meter accuracy test reports to determine the number of DoD Components' water meters that were not working properly or not working at all. We also reviewed WASA meter readings since 1990, if available, to determine how long water meters have not been working. We accompanied WASA personnel to read DoD Components' water meters to verify the meters were working. We also observed calibration tests on four water meters to determine meter maintenance requirements.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the Financial Management high-risk area.

Use of Computer-Processed Data. We did not rely on computer-processed data for our review of the accuracy of DoD Components' water meters serviced by the District of Columbia and the related management controls.

Audit Dates and Standards. We performed the audit from July 2001 through April 2002 in accordance with generally accepted government auditing standards.

Contacts During the Audit. We visited or contacted individuals and organizations within DoD and the District of Columbia Water and Sewer Authority. Further details are available upon request.

Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of the Review of the Management Control Program. We reviewed the adequacy of DoD Components' management controls over meter readings and inspections. Specifically, we reviewed DoD Components' controls over the maintenance and replacement of water meters. Management did not have self-evaluations applicable to these controls.

Adequacy of Management Controls. We identified material management control weaknesses for DoD Components as defined by DoD Instruction 5010.40. DoD Components did not have management controls to ensure that meter readings and inspections were performed properly and that maintenance and replacement of meters were completed as necessary. Recommendations 1.a., 1.b., 1.c., and 1.d., if implemented will improve DoD Components' controls over the maintenance and replacement of water meters. A copy of the report will be provided to each official responsible for management controls for each DoD Component.

Prior Coverage

The Inspector General of the Department of Defense (IG DoD) has conducted multiple audits related to DoD Components' payments for water and sewer services provided by the District of Columbia Water and Sewer Authority. IG DoD reports can be accessed on the Internet at <http://www.dodig.osd.mil/audit/reports>.

Appendix B. DoD Customers of the District of Columbia Water and Sewer Authority

The 16 DoD Components for which the WASA provides water and sewer services are listed below.

Army

Arlington National Cemetery
Fort McNair
Walter Reed Army Medical Center

Navy

Anacostia Naval Station
Bellevue Naval Housing
Marine Corps Barracks, 8th & I
Naval Observatory
Naval Research Laboratory
Nebraska Avenue Annex
Potomac Annex
Washington Navy Yard

Air Force

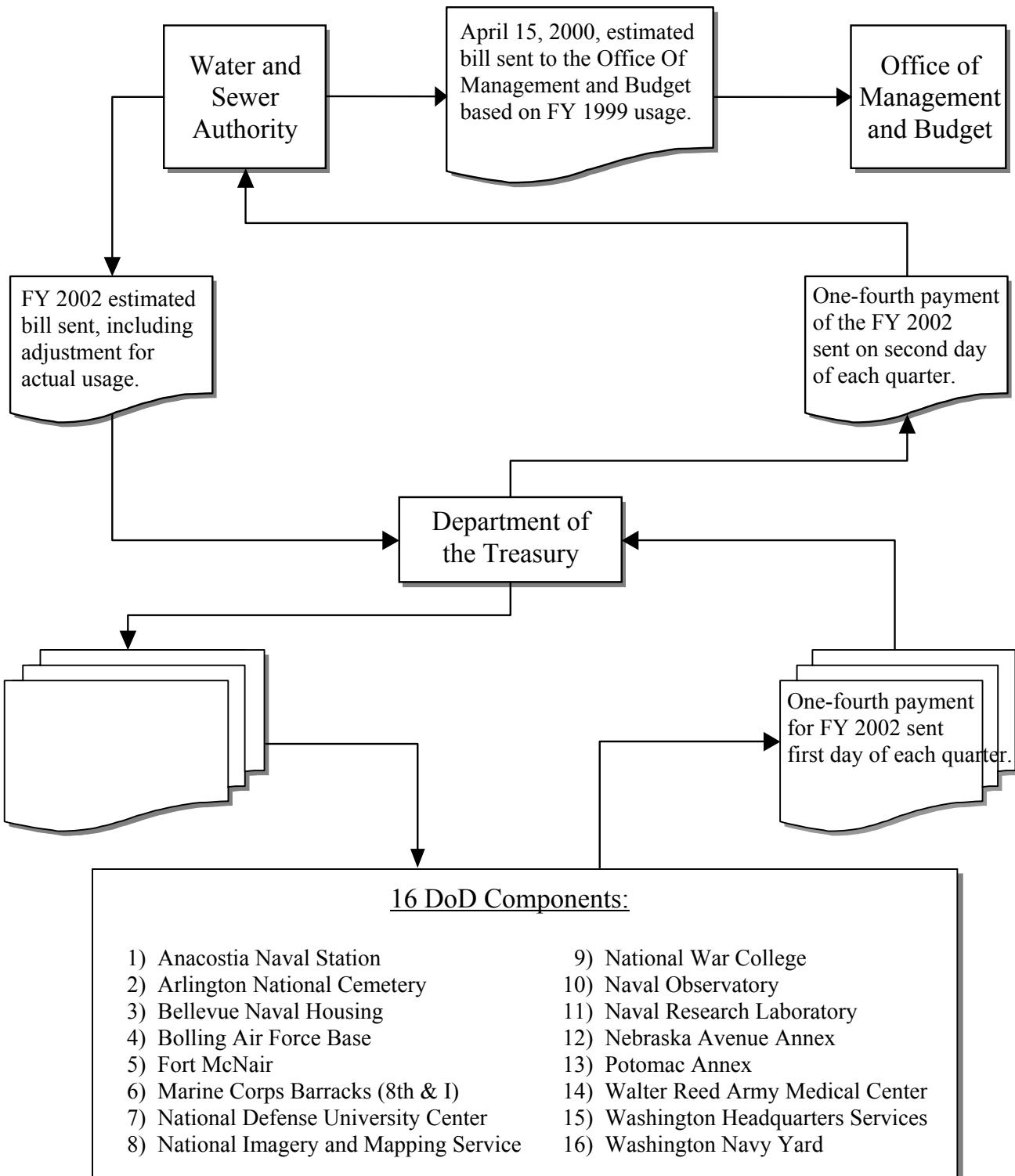
Bolling Air Force Base

Other Defense Organizations

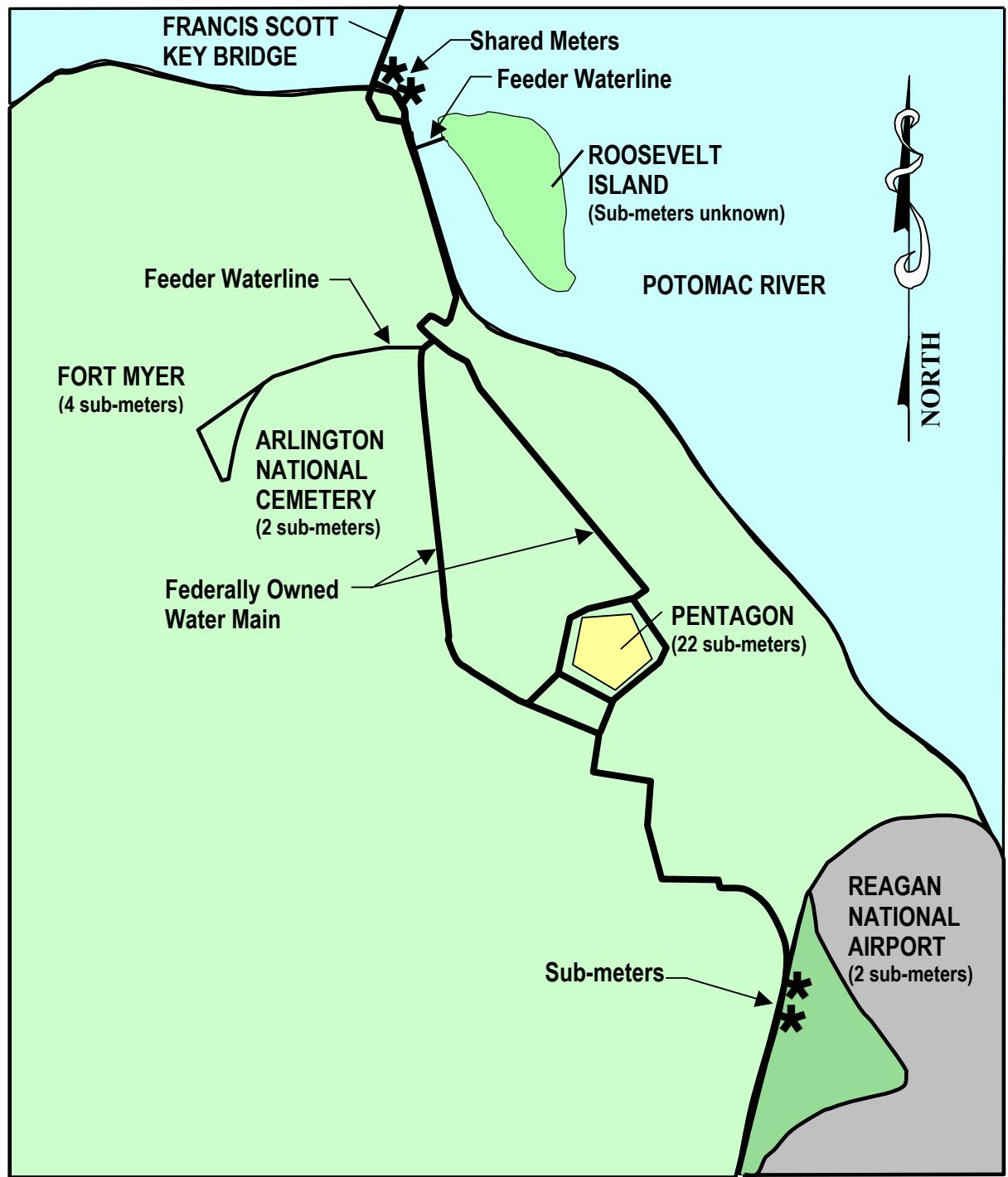
National Defense University Center
National Imagery and Mapping Agency
National War College
Washington Headquarters Services

Appendix C. FY 2002 Billing and Payment Process

WASA provides meter readings and annual estimated bills to the Department of the Treasury for water and sewer services for Federal agencies and DoD Components within the National Capital Region. Based on the information the Department of the Treasury receives from WASA, the Department of the Treasury prepares bills for the Federal agencies and DoD Components. Generally, in the second quarter of each fiscal year, DoD Components receive annual bills from the Department of the Treasury that show the estimated bill for the fiscal year, including adjustments based on actual usage from 3 years prior, and the quarterly payments due for the second, third, and fourth quarters. To illustrate, on April 15, 2000, WASA prepared a bill that contained an estimate of anticipated water and sewer usage for use in the FY 2002 President's Budget. The bill included adjustments for actual water and sewer usage variances in FY 1999. The bill was sent to the Department of the Treasury for distribution to the Federal agencies and DoD Components.



Appendix D. Illustration of Federally Owned Water Main



Appendix E. Report Distribution

Office of the Secretary of Defense

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Commander, Walter Reed Army Medical Center
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Superintendent, Arlington National Cemetery

Department of the Navy

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Commander, Naval Facilities Engineering Command

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
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Commander, Bolling Air Force Base

Defense Organizations

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Non-Defense Federal Organizations

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Department of Navy Comments



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(INSTALLATIONS AND ENVIRONMENT)
1000 NAVY PENTAGON
WASHINGTON, D.C. 20380-1000

JUL - 9 2002

MEMORANDUM FOR DIRECTOR, CONTRACT MANAGEMENT DIRECTORATE,
INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Subj: AUDIT OF WATER USAGE IN THE NATIONAL CAPITAL REGION
(AUDIT REPORT D2001FA-0154.001)

The Department of the Navy concurs with the audit findings and recommendations provided in your letter May 10, 2002.

The major finding of the referenced audit report is that water usage by Naval activities in the Washington DC area is being overcharged. The report recommends establishing a metering program that captures and verifies actual water usage. We will have a plan to implement the audit's recommendations by September 30, 2002.

If I can be of further assistance, please let me know.

H T Johnson
H. T. Johnson

Copy to:
OPNAV 09BF
Naval District Washington
COMNAVFACENGCOM
PWC Washington

National Imagery and Mapping Agency Comments



NATIONAL IMAGERY AND MAPPING AGENCY
4800 SANGAMORE ROAD
BETHESDA, MARYLAND 20818-5003

JUL 12 2002

U-190-02/OIG

MEMORANDUM FOR DIRECTOR, CONTRACT MANAGEMENT DIRECTORATE,
INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report, "Measurement of Water Usage
by DoD Components Serviced by the District of
Columbia Water and Sewer Authority"
(Project No. D2001FA-0154.001)

REFERENCE: DoD IG memorandum, 10 May 2002, subject as above

1. The National Imagery and Mapping Agency has reviewed
subject draft report. We concur with the finding and
recommendations as written. Our comments to the draft report
are provided in the enclosure.
2. Should you or your staff have any questions regarding our
response, please direct them to the NIMA Office of Inspector
General, Ms. Lenore Guthrie, NIMA External Audit Liaison, at
(301) 227-0709.


JAMES R. CLAPPER, JR.
Lieutenant General, USAF (Ret.)
Director

Enclosure a/s

UNCLASSIFIED

NIMA RESPONSE TO DOD IG DRAFT AUDIT REPORT
"MEASUREMENT OF WATER USAGE BY DOD COMPONENTS SERVICED BY THE
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY"
(PROJECT NUMBER D2001FA-0154.001)

Comments to the Report Recommendation 1., Page 8.

Recommendation 1. We recommend that the Commander, Walter Reed Army Medical Center; Commander, Fort Myer; Director, Arlington National Cemetery; Director, Navy Staff (Field Support Activity); Commander, Bolling Air Force Base; Director, National Imagery and Mapping Agency; and Director, Washington Headquarters Services:

a. Locate and test water meters that measure water service from the District of Columbia Water and Sewer Authority.

NIMA Response. We concur with the recommendation. The water meter that services NIMA is outside the fence line on the property of the Dalecarlia Water Treatment Plant (DWTP). In the past, NIMA has not certified this meter. We are not aware if the DWTP ever serviced the meter. During the audit, the meter was not tested. NIMA will coordinate with DWTP and the Controls and Instrumentation Branch of the District of Columbia Water and Sewer Authority (DCWASA) to test the meter.

b. Establish and implement procedures to verify that the District of Columbia Water and Sewer Authority routinely inspects and reports results of inspections for DoD-owned water meters.

NIMA Response. We concur with the recommendation. As previously stated, NIMA will coordinate with the Controls and Instrumentation Branch of DCWASA to establish an annual program to re-certify and routinely inspect the meter.

c. Develop and implement effective controls and procedures to verify that the District of Columbia Water and Sewer Authority accurately reads water meters to ensure that estimated water and sewer bills are reliable.

NIMA Response. We concur with the recommendation. NIMA will take its own meter readings quarterly to compare against DCWASA submittals to ensure estimated water and sewer bills are

Enclosure

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reliable. We will create a quarterly maintenance task in the maintenance database of the Bethesda Site Manager to perform the readings and will coordinate with DCWASA on the meter readings to ensure the readings are consistent.

d. Establish and implement a maintenance program to repair or replace inoperable water meters.

NIMA Response. We concur with the recommendation. NIMA, in coordination with DCWASA, will evaluate annual results of meter certifications and actual water meter readings to ensure that water usage is accurate. If problems are found with the meter, NIMA will initiate work requests through DCWASA for repair.

General Comments Regarding Management Controls, Appendix A.-
Audit Process, Page 11.

NIMA concurs with the management control statement and agrees that the recommendations included in the report, when implemented, should greatly improve NIMA controls over the maintenance and replacement of water meters while resolving the concern over having adequate management controls.

Washington Headquarters Services Comments



DEPARTMENT OF DEFENSE
WASHINGTON HEADQUARTERS SERVICES
1155 DEFENSE PENTAGON
WASHINGTON, DC 20301-1155

JUL 26 2002

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE

SUBJECT: Audit Report on Measurement of Water Usage by DoD Components
Serviced by the District of Columbia Water and Sewer Authority
(Project No. D2001Fa-0154.001)

Washington Headquarters Services (WHS) has reviewed the Draft of Proposed Audit Report subject as above and provide the following comments.

Reference Recommendations, Page 8:

1. We recommend that the Commander, Walter Reed Army Medical Center; Commander, Fort Myer; Director, Arlington National Cemetery; Director, Navy Staff (Field Support Activity); Commander, Bolling Air Force Base; Director, National Imagery and Mapping Agency; and Director, Washington Headquarters Services:

a. Locate and test water meters that measure water service from the District of Columbia Water and Sewer Authority.

Comment: A contract is in place and will be executed to replace the existing 16" and 18" Key Bridge water meters before the end of FY02. DoD has forwarded a preliminary design to Arlington County and DC WASA for approval. We have received Arlington's comments and are awaiting WASA's. The accuracy of these meters have always been in question. DC WASA has expressed some interest in "buying back" those meters and possibly relocated them to the DC side of the Potomac in the distant future. DoD will continue to be responsible for any repairs to the river crossing.

b. Establish and implement procedures to verify that the District of Columbia Water and Sewer Authority routinely inspects and reports results of inspections of DoD-owned water meters.

Comment: We have no records of any inspections of the Key Bridge meters, but we believe that DC WASA performs them annually. A request for the past two years reports was sent today to DC WASA.



c. Develop and implement effective controls and procedures to verify that the District of Columbia Water and Sewer Authority accurately reads water meters to ensure that estimated water and sewer bills are reliable.

Comment: DC WASA now has their monthly consumption data available on line and we were provided usernames and passwords for access. In the past, we had never been provided any meter reading data, either from the Treasury or DC WASA. The new meters to be installed are factory calibrated. Through a combined effort of DoD, Arlington County and DC WASA, the metered consumption of the Key Bridge and FOWM meters will be compared to validate the accuracy of those meters and quantify any FOWM system losses.

d. Establish and implement a maintenance program to repair or replace inoperable water meters.

Comment: As mentioned previously in (1), the Key Bridge meters are being replaced.

2. We recommend that the Director, Washington Headquarters Services should establish procedures to:

a. Determine that all meters connected to the Federally Owned Water Main are Properly read and tested for accuracy.

Comment: A contract is in place and will be executed to replace the existing "16 and 18" Key Bridge water meters before the end of FY 2002. The Department of Defense (DoD) has forwarded a preliminary design to Arlington County and District of Columbia's Water and Sewer Authority (WASA) for approval. We have received Arlington's comments and are waiting for comments from WASA.

b. Reconcile the District of Columbia Water and Sewer Authority meter readings for shared meters at the Francis Scott Key Bridge with the readings for individual meters along the Federally Owned Water Main.

Comment: WHS has been given access to WASA's monthly on-line consumption data and in the future will be able to compare the accuracy of meters and quantify any Federally Owned Water Main (FOWM) data. WASA is now reading the FOWM meters monthly and WHS has been working together with them to sort out reading inconsistencies. The new meters to be installed are factory calibrated. Through a combined effort of DoD, Arlington, County and WASA, the metered consumption of the Key Bridge and FOWM meters will be compared to validate the accuracy of those meters and quantify any FOWM system losses.

Ref. Appendix A., Audit Process. Scope of the Review of the Management Control Program.

Finding: Management did not have self-evaluations applicable to these controls.

Comments: WHS is working to ensure that future meter readings and inspections are performed properly and maintenance and repair are completed as necessary. Additionally, this finding of a material management control weakness and milestones for corrective actions will be identified in the FY 2003 Annual Statement of Assurance.

If you require further information please contact Ms. Jackie Jackson at 703-693-8613.


Paul K. Haselbush
Director
Real Estate and Facilities

Arlington National Cemetery Comments



REPLY TO
ATTENTION OF

ANNC

DEPARTMENT OF THE ARMY
ARLINGTON NATIONAL CEMETERY
ARLINGTON VA 22211-5003



18 July, 2002

MEMORANDUM FOR Inspector General, Department of Defense
400 Army Navy Drive, Arlington, VA 22202-4704

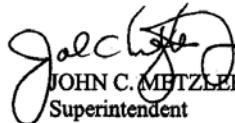
SUBJECT: Audit Report on Measurement of Water Usage by DoD Components
Serviced by the District of Columbia Water and Sewer Authority
(Project No. D2001FA-0154.001)

Reference: Draft Report of the subject above, dated May 10, 2002.

Arlington National Cemetery has implemented the following recommendations:

- a. The District of Columbia Water and Sewer Authority are performing monthly water meter readings to measure our water service. Payment of \$110,000.00 was made to the District of Columbia Water and Sewer Authority.
- b. We currently verify the District of Columbia Water and Sewer Authority inspects at the time of the meter readings.
- c. We have developed and will implement controls through our Internal Management Control Program to monitor the accuracy of the water readings.
- d. We will continue to monitor this process by use of Internal Management Controls.

If you require additional information, please contact Ms. Phyllis White at 703-695-3191.



JOHN C. METZLER, JR.
Superintendent

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Team Members

The Contract Management Directorate, Office of the Assistant Inspector General for Auditing of the Department of Defense prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

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